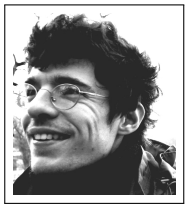
Gabriele Tosadori

Bio



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Like a lot of people, I was born. Later on, I developed an interest for biology and computers. Currently, I design and develop computational solutions to address biological problems. I am an open minded, very curious person with a strong *hands-on* approach. I love to teach, spread knowledge, and release open-source code. Finally, I am very sensitive to (and quite worried about) environmental issues and I enjoy biking to places.

Education

Università degli Studi di Verona

- **PhD** in Computer Science, supervised by prof. Fausto Spoto and prof. Carlo Laudanna;
- **Master's Degree** in Bioinformatics and medical biotechnology;
- **Bachelor's Degree** in Bioinformatics.

Istituto Tecnico Agrario Statale M.A. Bentegodi High-school Diploma in Agriculture.

Job

Università degli Studi di Verona Via dell'Artigliere 8, 37129 Verona.

- June 2018 - today: as a **postdoc** in the Laboratory Of NeuroImmunology, I am designing and developing systems biology approaches to model neuropathology data. Also, I am working on single cell RNA-seq data, under the supervision of prof. Gabriela Constantin;
- June 2017 - June 2018: as a **research fellow** I participated in the development of a vertical farm, collected and analysed data to investigate plant-environment-disease interactions, under the supervision of prof. Davide Quaglia;
- January 2014 - June 2017: as a **PhD** student I designed and developed a **novel network model**, and a **Cytoscape app**. I was also involved in several research projects.

EnacLab Via S. Giuseppe, 10, 37123 Verona.

November 2016 - January 2017: I taught basic and advanced concepts of Word, Excel, and basic statistics.

Lectures & Presentations

January 13th-18th 2019: **invited speaker** at UniVR Winter School "Understanding human genome variations and their influences on human traits - Bioinformatics insights", held at Alba di Canazei (TN);

January 13th 2017: **invited speaker** at Istituto di Tecnologie Biomediche, Consiglio Nazionale delle Ricerche (MI);

2016, 2019, 2020: poster session at NetSci and NetSciX.

Università degli Studi di Verona:

- 2018 - 2021: practical lessons for UniVR Master's course in *Systems biology*;
- 2016, 2018, 2019: PhD program in Inflammation, Immunity and Cancer, about *Biological networks construction and analysis*, and *Data analysis in biology*;

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Students supervision

- September 2018 - October 2020: I supervised three master students and together we developed their thesis project and dissertation, all in the field of systems biology.
- May-June 2016: in collaboration with the National Resource for Network Biology (NRNB), I supervised a student and together we developed NetworkRandomizer.

Review I had the opportunity to review several manuscripts and to be guest editor for a special issue

Skills

Languages

- Italian, mother tongue;
- English, good knowledge (Level **B2+**).

Information Technologies

- fluent with R, Linux bash, RMarkdown, and Python;
- graph theory, network analysis, single cell RNA-seq data analysis;
- image analysis, data analysis & machine learning;
- SQL, relational databases design and implementation;
- Linux, RStudio, Java SE, Git, and LaTeX;
- design & development of NetworkRandomizer and CentiScaPe.

Personal

- I have interdisciplinary thinking and practical approach thanks to my path as bioinformatician;
- I can work alone and in team, thanks to several scientific collaborations I have been participating into;
- I can work under pressure and evaluate risks, thanks to my caving experience;
- I have been doing a lot of writing and presenting as a PhD and postdoc;
- I really enjoy teaching, sharing and supervising.

Stuff

since 2007: at GASV caving club I am participating and organising explorations in karst areas, restoration of underground environments, and popularisation. Main website developer and keeper;

since 2009: Independent blood donor;

since I learnt cycling: determined bike commuter.

The undersigned declares, under his own responsibility and according to articles 46 and 47 of the D.P.R. 445/2000, that everything stated in this document and in the relevant attachments is true, and that they are aware of the legal sanctions defined in article 76 of the D.P.R 445/2000.

Verona, February 23, 2021

I agree to the handling of my personal data in accordance with Italian D.lgs. 196/2003 and European GDPR 2016/679

Publications

[1] Tosadori G, Di Silvestre D, Spoto F, Mauri P, Laudanna C, and Scardoni G. Analysing omics data sets with weighted nodes networks (wnnets). *in revision at Scientific Reports*, 2021.

[2] Baucon A, Neto de Carvalho C, Felletti F, Tosadori G, and Antonelli A. Small-world dynamics drove phanerozoic divergence of burrowing behaviours. *Geology, accepted for publication*, 2021.

[3] Dusi S, Angiari S, Amoruso A, Lopez N, Della Bianca V, Zenaro E, Pietronigro EC, Carlucci T, Constantin G, and Rossi B. Lfa-1 controls th1 and th17 motility behavior in the inflamed central nervous system. *Frontiers in Immunology*, 10, 2019.

[4] Pietronigro EC, Zenaro E, Della Bianca V, Dusi S, Terrabuio E, Iannoto G, Slanzi A, Ghasemi S, Nagarajan R, and Piacentino G et Al. Blockade of $\alpha 4$ integrins reduces leukocyte–endothelial interactions in cerebral vessels and improves memory in a mouse model of alzheimer's disease. *Scientific reports*, 9, 2019.

[5] Scardoni G, Tosadori G, Morris J, Pratap S, Laudanna C, and Han A. Computational methods for signal transduction: A network approach. In *Cellular Signal Transduction in Toxicology and Pharmacology: Data Collection, Analysis, and Interpretation*. Wiley, 2019.

[6] Malpeli G, Barbi S, Tosadori G, Greco C, Zupo S, Pedron S, Brunelli M, Bertolaso A, Scupoli MT, Krampera M, and et Al. Myc-related micrornas signatures in non-hodgkin b-cell lymphomas and their relationships with core cellular pathways. *Oncotarget*, 9, 2018.

[7] Malpeli G, Barbi S, Zupo Simonetta, Tosadori G, Scardoni G, Bertolaso A, Sartoris S, Ugel S, Vicentini C, and Fassan M et Al. Identification of micrornas implicated in the late differentiation stages of normal b cells suggests a central role for mirna targets zeb1 and tp53. *Oncotarget*, 8, 2017.

[8] Tosadori G, Spoto F, Scardoni G, and Laudanna C. *Biological network analysis: from topological indexes to biological applications towards personalised medicine*. PhD thesis, Department of Computer Science, University of Verona, 2017.

[9] Tosadori G, Bestvina I, Spoto F, Laudanna C, and Scardoni G. Creating, generating and comparing random network models with networkrandomizer. *F1000Research*, 5, 2016.

[10] Zenaro E, Pietronigro EC, Della Bianca V, Piacentino G, Marongiu L, Budui S, Turano E, Rossi B, Angiari S, and Dusi S et Al. Neutrophils promote alzheimer's disease–like pathology and cognitive decline via lfa-1 integrin. *Nature medicine*, 21, 2015.

[11] Scardoni G, Tosadori G, Pratap S, Spoto F, and Laudanna C. Finding the shortest path with pesca: a tool for network reconstruction. *F1000Research*, 4, 2015.

[12] Scardoni G, Tosadori G, Mohammed F, Spoto F, Fabbri F, and Laudanna C. Biological network analysis with centiscape: centralities and experimental dataset integration. *F1000Research*, 3, 2014.

[13] Scardoni G, Montresor A, Tosadori G, and Laudanna C. Node interference and robustness: performing virtual knock-out experiments on biological networks: the case of leukocyte integrin activation network. *PloS one*, 9, 2014.

[14] Tosadori G, Pietronigro EC, Piacentino G, Saatchi T, and Constantin G. Robustness of microglial networks in alzheimer's disease, Presented as poster at NetSci 2020.

[15] Tosadori G, Pietronigro EC, and Constantin G. Reconstruction and analysis of microglial networks in alzheimer's disease, Presented as poster at NetSci 2019.

[16] Tosadori G, Spoto F, Laudanna C, and Scardoni G. Simulating real data topologies with R, Presented as poster at NetSciX 2016.

[17] Castellini A, Manca V, Compri S, Tosadori G, Marino V, and Bicego M. Genome classification by dictionary-based indexes, Poster at Pattern Recognition in Bioinformatics 2011.